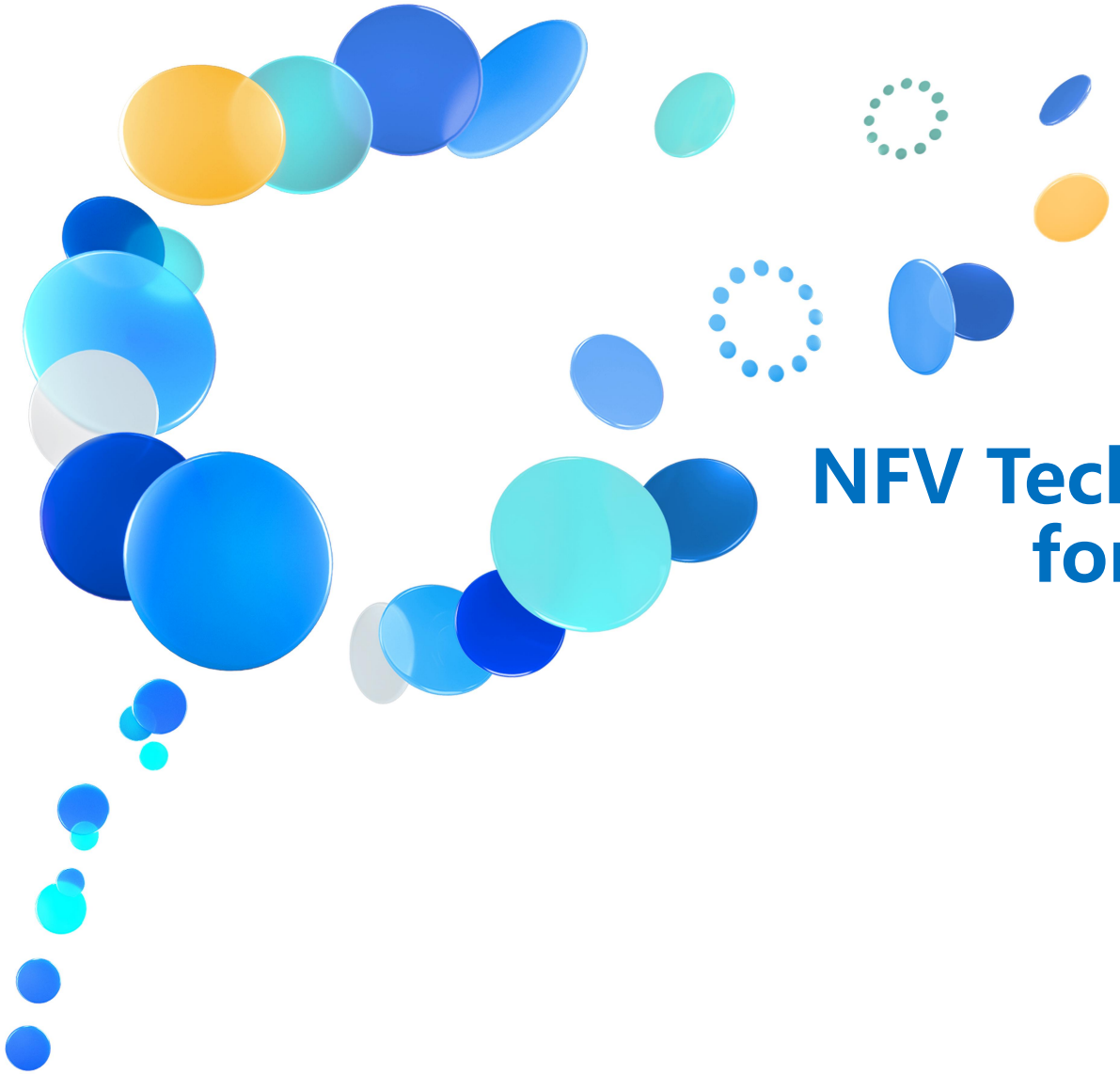
ZTE



# NFV Technical Architecture Principle for Cloud Resource Pool

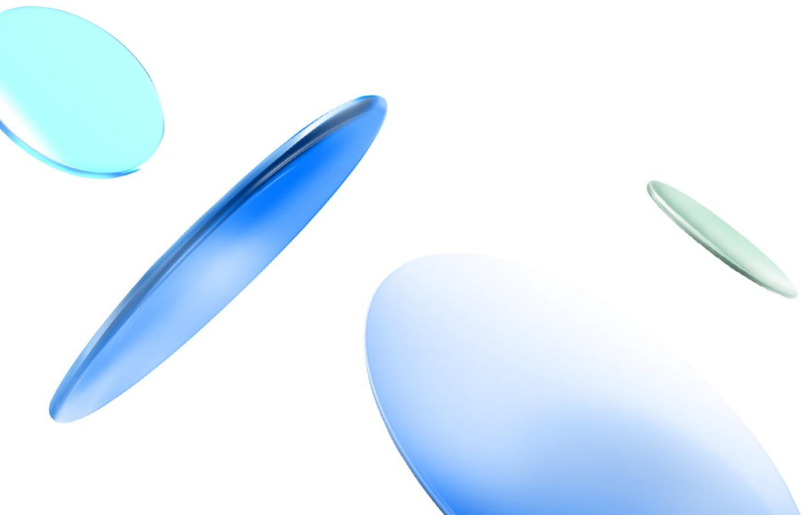
# Contents

**Virtualization Development Background**

Basic Virtualization Concepts

Virtualization Architecture Features

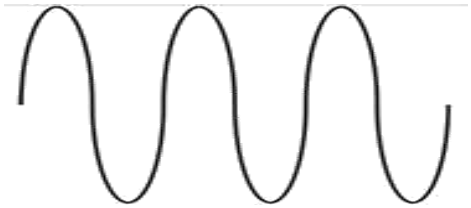
Introduction to the ZTE Virtualization Platform



# Evolution of the Communications Industry

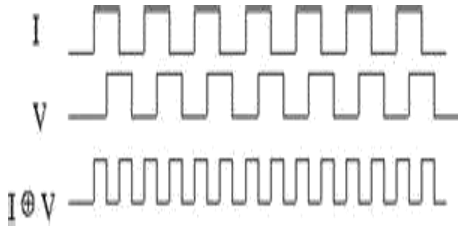
- The development of communication networks is a process of continuously learning new technologies and generating youth. After the development of analog communication, digital communication, and IP-based communication, the current communication network is rapidly turning to the communication 4.0 era based on virtualization, software, and other IT technologies.

**Communication 1.0: Analog**



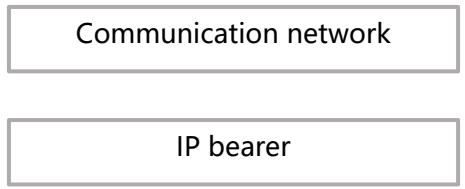
1G represents analog communication.

**Communications 2.0: Digital**



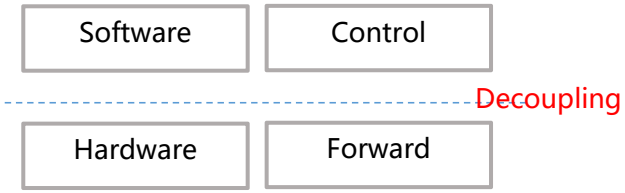

Digital Communication with 2G as Representative

**Communication 3.0: IP-based (CT core, CT over IP)**




3G/4G is gradually developed from softswitch to IMS and finally to VoLTE.

**Communication 4.0: IT-based (ICT)**




NFV/SDN is a catalyst for ICT, driving IT/CT to deeply integrate.

- The core of the transformation in the past decade is IP-based, which is characterized by the essence of the CT network and IP-based external communication modes (bearer and protocol).
- The core of the next change is IT-based networks. The IT-based networks are used to reconstruct telecom networks.

# Value and Strategies Introduced by the Telecom Network NFV

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Value

| CAPEX | OPEX | REVENUE | ECOSYSTEM |
|---|---|---|---|
| • Low redundancy rate/high utilization rate based on cloud self-healing and elastic mechanisms<br>• When a service exits due to failure or obsolescence, hardware resources can be reused to reduce some repeated investments<br>• Software and hardware separated development/purchase, reducing technical thresholds and development costs, full competition, and scale effect of general hardware development costs | • Unified hardware reduces the planning and O&M complexity of multiple dedicated devices, and improves O&M efficiency<br>• Centralized deployment and automatic O&M, reducing O&M personnel and improving efficiency<br>• Unified infrastructure platform to shorten TTM<br>• The network slicing capability rapidly provides soft networks/services for different users on the unified infrastructure platform | • Open network capabilities, from closed service supply to extensive cooperation<br>• The network architecture is flexible, and the service perception and adaptation capability is stronger and faster. Compared with a rigid network, the network is more suitable for unpredictable new service innovation, increasing profits | • Open, separate software and hardware development and purchase, lower investment, lower technical threshold, more player, and more full competition<br>• Open, replace hardware/software vendors faster, eliminate vendor-locking<br>• Deliver business faster with lower costs and risk |

**Cost-Driven**

Expand networks and services with low costs and risks.
Deploy automatic O&M to reduce OPEX.

**Service-driven**

Network programmability and service orchestration
Fast launch of new services and continuous service innovation

**Evolution**

Fast, efficient, and open Internet Innovative Network Platform of the, Evolution to 5G

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